## **ABSTRACT**

A system facilitates the design and implementation of largescale applications, such as Internet Services and Websites, for distributed computer systems, such as server data centers, Internet data centers (IDCs), Web farms, and the like. The system has a modeling system and a deployment system. The modeling system permits developers to architect the hardware and software used to implement the applications in an abstract manner. The modeling system defines a set of components used to describe the functionality The model components are arranged and of an application. interconnected to form a scale-independent logical model of the application. Once a logical model is created, the deployment system uses the logical model to automatically deploy computer/software resources to implement the application. The deployment system converts each of the model components into one or more instances that correspond to physical resources.